preliminary study of Xinjiang Carbon dioxide capture, utilization and storage (CCUS) Technology Roadmap

Alex Shi
师 庆 三

Geological and Mining Engineering Institute , Xinjiang University

目录

Outline

一、Abstract（摘要）

新疆是资源产出及消费大省，拥有丰富的煤炭、石油及天然气资源，随着经济的快速发展和能源消费的进一步提高，新疆的CO_2排放量上升趋势明显，且增速较快。相对于中国的其他地区，新疆有着源汇毗邻、地广人稀、地质封存潜力大、成本相对较低等明显的优势，有利于二氧化碳的捕集与封存技术的实施，同时缓解新疆这个资源与消耗大省由于CO_2排放所引起的负面效应 。

我们前期的主要任务及目标为:

①新疆地区的碳源区域分布以及产能调查;

②新疆地区的碳汇区域调查（构造尺度）;

③新疆地区的碳源和碳汇的源汇匹配研究;

④新疆地区的CCUS政策建议。

二、The purpose and significance of Xinjiang CCUS roadmap preliminary study

1、The purpose of Xinjiang CCUS roadmap preliminary study

①To provide basic information of CO_2 emissions scale, distribution, characteristics of emission in Xinjiang；

② To provide basic information of sites of CO_2 storage scale, distribution, and geological characteristics in Xinjiang；

③ To provide basic data for the later implement and technological selection of Xinjiang CCUS project；

④ To provide credible policy recommendations for the CCUS projects in Xinjiang.

2、Significance of Xinjiang CCUS study

CCUS research first needs to know the characteristics of CO_2 emission by investigating the actual situation of CO_2 emissions to take effective trapping measures..

The safety of CO_2 sequestration is CCUS final foothold. To some extent， feasibility of storage determines the technical feasibility of CCUS.

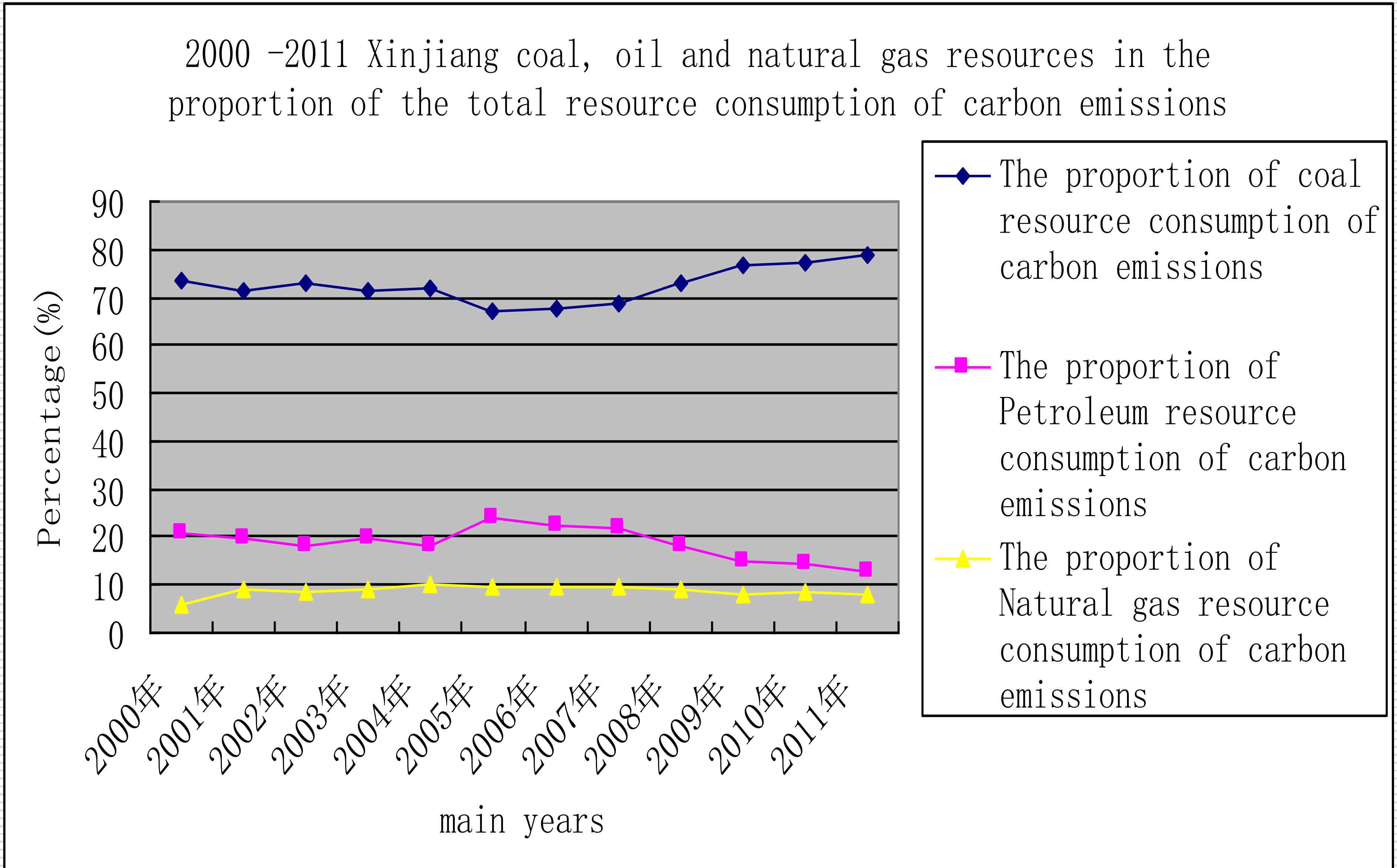
CCUS technology provides a practical way to reduce CO_2 emissions in Xinjiang. The preliminary investigation of CCUS technology has a significant and far-reaching significance to the sustainable development of energy, economy and environment and to the great-leap-forward development of Xinjiang.

三、Introduction to the main carbon source in Xinjiang

1、Coal-dominated energy structure

a、the estimated reserve of Xinjiang coal resources is **2.19×10^{12}t**, accounting for **40.5%** of the national total reserves and ranking **first** in our country. Coal and its related industries are the leading and dominant industries in Xinjiang.

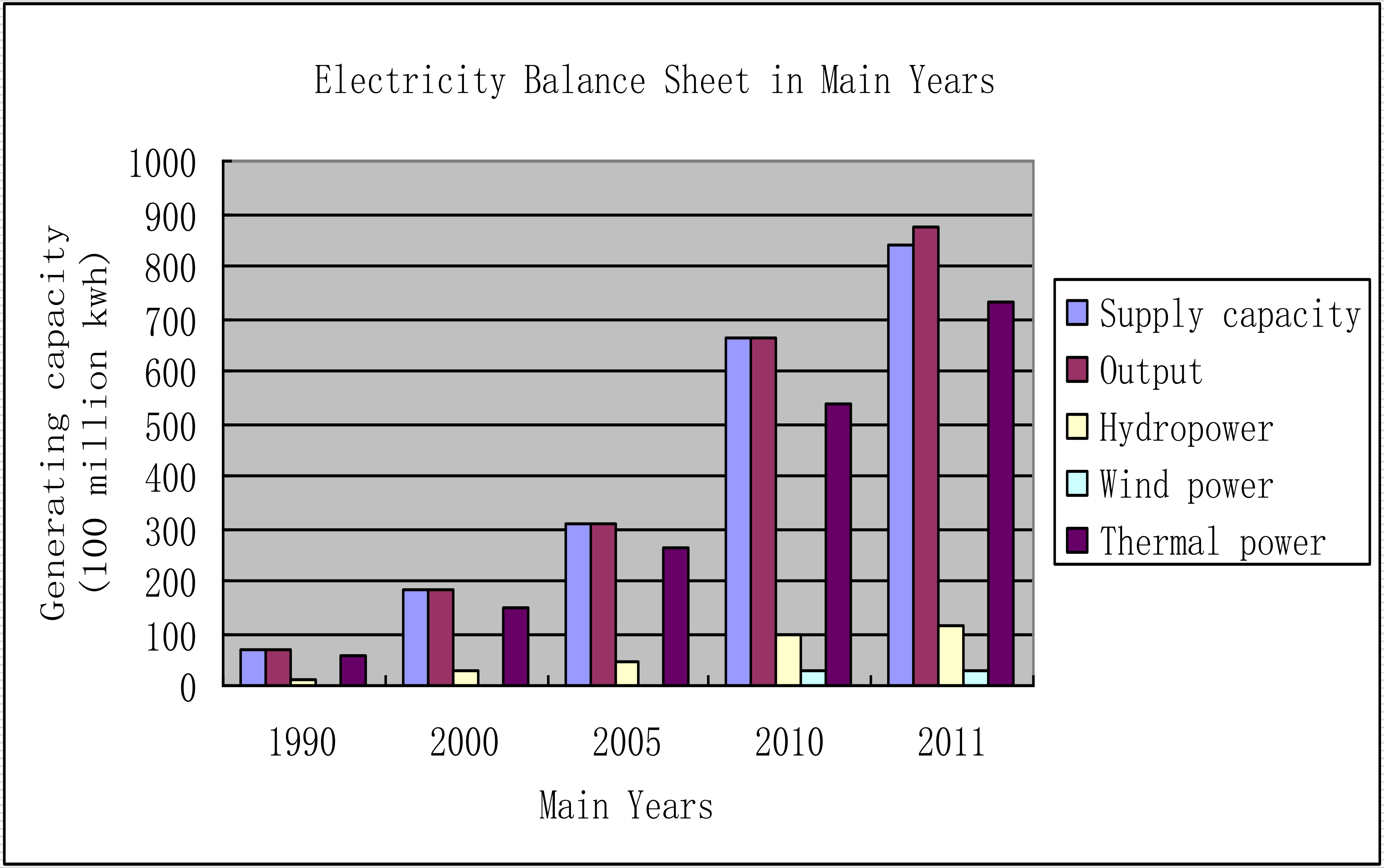
b、the coal resource consumption accounted for **more than 65%** of total carbon emissions in Xinjiang, Showing the carbon emissions produced by coal consumption-based carbon structure (see table 1).


2000 -2011 Xinjiang coal, oil and natural gas resources in the proportion of the total resource consumption of carbon emissions
Percentage (%)
90
80
70
60
50
40
30
20
10
0
2000年
2001年
2002年
2003年
2004年
2005年
2006年
2007年
2008年
2009年
2010年
2011年
main years
The proportion of coal resource consumption of carbon emissions
The proportion of Petroleum resource consumption of carbon emissions
The proportion of Natural gas resource consumption of carbon emissions

2、the thermal power plants based on coal resource

The energy production and consumption structure has a features of coal-based consumption in Xinjiang. The medium-sized thermal power plant generating capacity reached to **732.36×100 million kWh in 2011,** Accounting for **87.28%** of total electricity supply of xinjiang。

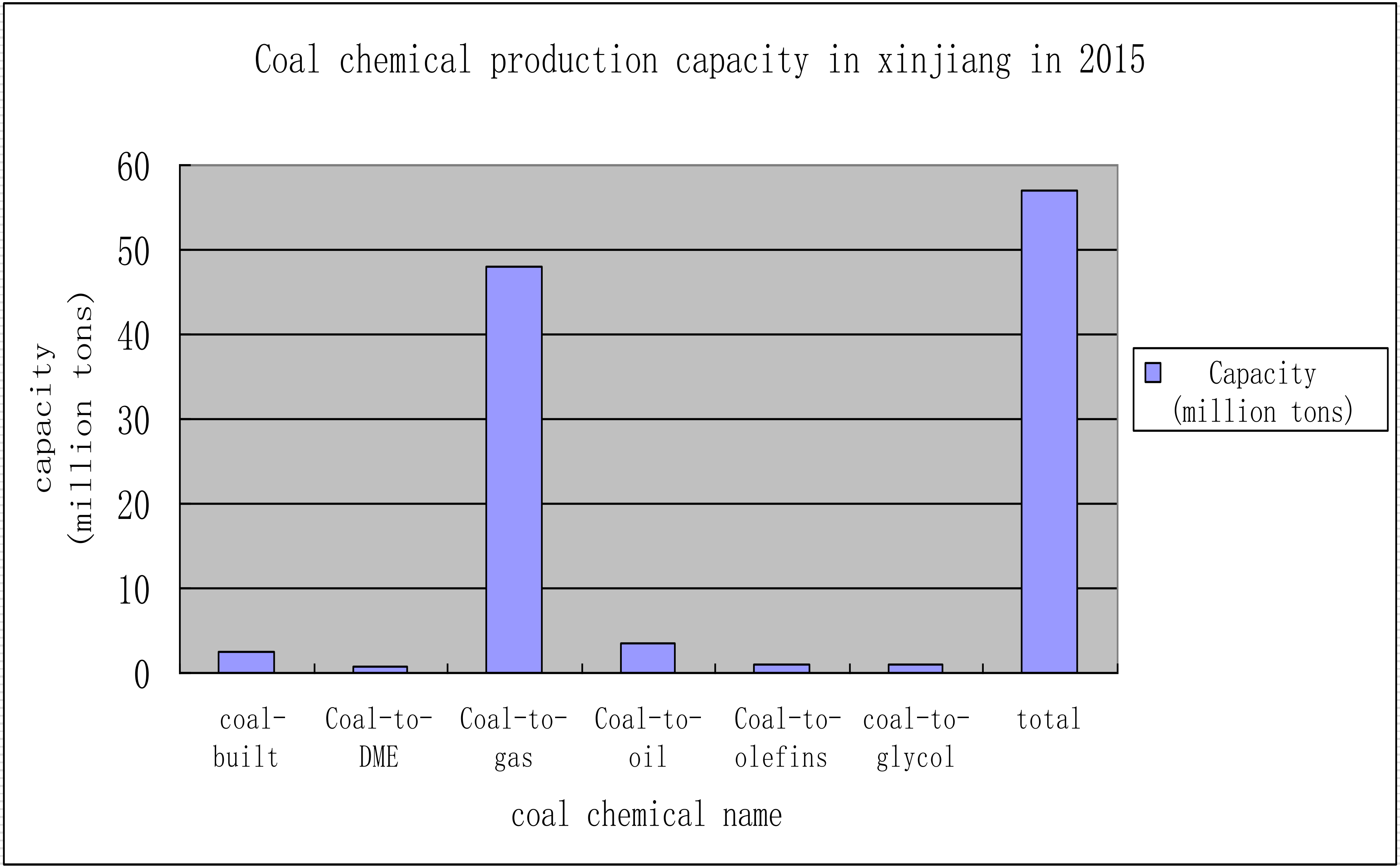
新疆主要年份电力平衡表 Xinjiang electric power balance in Main Years						
Electricity Balance Sheet in Main Years						
单位:亿千瓦小时						(100 million kwh)
项 目	Item	1990	2000	2005	2010	2011
可供量	Total Energy Available for Consumption	69.79	182.98	310.14	661.96	839.1
生产量	Output	69.79	182.98	310.14	665.06	875.19
水 电	Hydropower	14.25	30.54	46.49	97.07	114.57
风 电	Wind Power	0.08	1.73	2.32	30.02	28.26
火 电	Thermal Power	55.46	150.71	261.33	538.63	732.36


Electricity Balance Sheet in Main Years
Generating capacity (100 million kwh)
1000
900
800
700
600
500
400
300
200
100
0
1990
2000
2005
2010
2011
Main Years
Supply capacity
Output
Hydropower
Wind power
Thermal power

3、Coal chemical industry is the focus of development

Coal chemical industry has become an important direction of industrial development in Xinjiang. The coal and natural gas occupies a leading position in Xinjiang coal chemical project.

The 12th Five Year Plan gives a clear descripton of the development of the modern coal chemical industry. The plan declares Ili region and Zhundong Coal Bases as the focus, By 2015, 2.6 million tons of coal-made urea, 0.8 million tons of Coal-to-DME, 60 billion m^3 Coal-to-gas 3.6 million tons of Coal-to-oil, 1 million tons of Coal-to-olefins and 1 million tons of coal-to-glycol will be produced.


Coal chemical production capacity in xinjiang in 2015
capacity (million tons)
60
50
40
30
20
10
0
coal-built
Coal-to-DME
Coal-to-gas
Coal-to-oil
Coal-to-olefins
coal-to-glycol
total
coal chemical name
Capacity (million tons)

4、Carbon dioxide emissions from other industries

①Cement plant

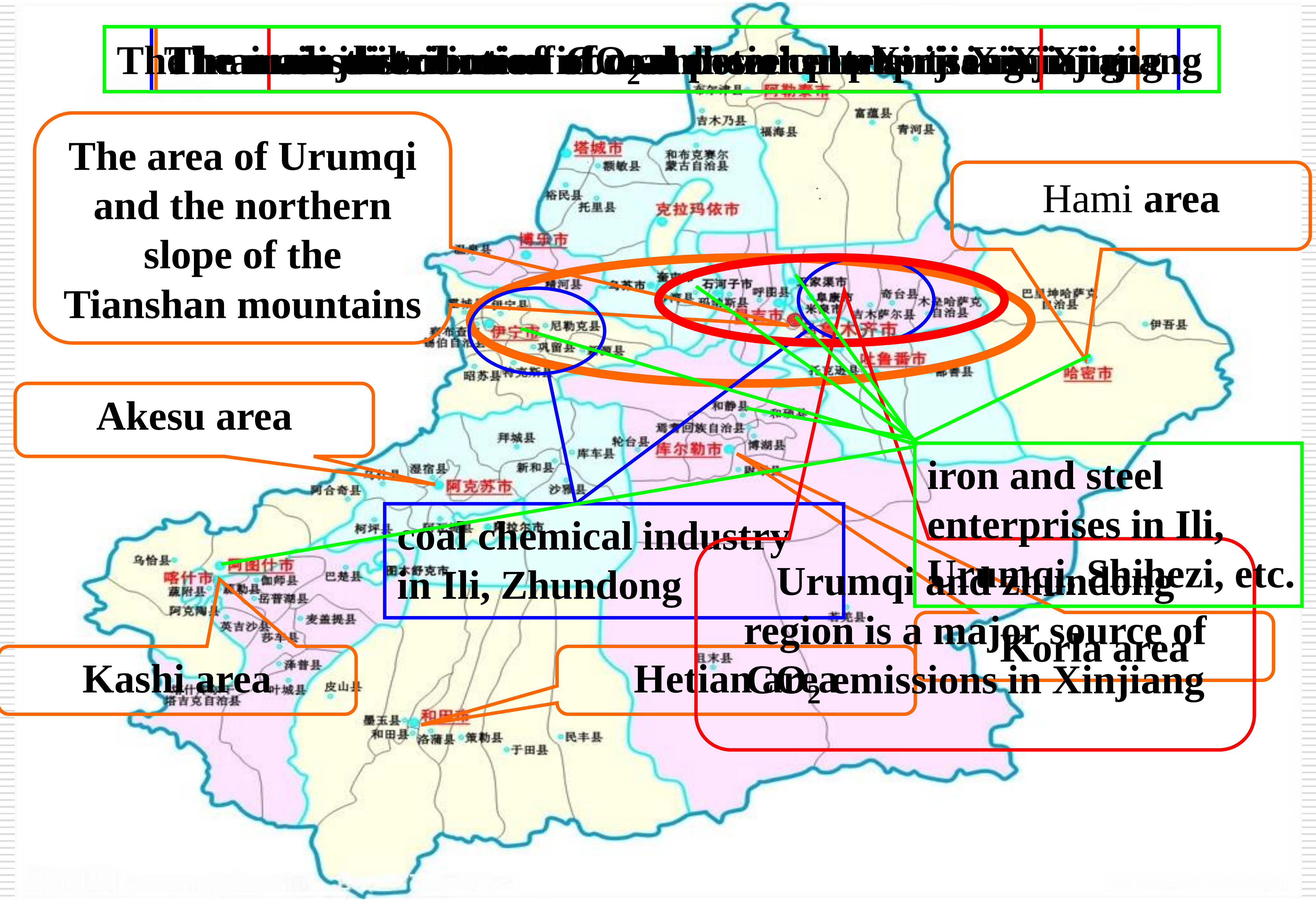
The cement industry is the greenhouse gas carbon dioxide emitters, are the key areas to address climate change. There are carbon dioxide gas source of cement production process, which produces carbon dioxide gas into the entity unit or the atmosphere in the process By the end of 2012, there had been **78 cement companies** in Xinjiang, with **more than 75 million tons of cement production capacity.**

②Steel Works

Xinjiang iron and steel industry is the main source of emissions, CO_2 emissions,under the coal chemical industry, electric power system and building materials (mainly cement production) industry, ranking the fourth place. Iron and steel industry arduous task of energy saving, reducing CO_2 emissions has become a problem in Xinjiang during the survival and development of the steel industry must be considered.Xinjiang existing **21 blast furnaces**, blast furnace design production capacity of **19.11million tons**.

③ Other sources

Besides the above industries, there are still other sources of emissions ,such as **fertilizer plants, coking plants.**



The area of Urumqi and the northern slope of the Tianshan mountains
Hami area
Akesu area
coal chemical industry in Ili, Zhundong
iron and steel enterprises in Ili, Urumqi, Shihezi, etc.
Urumqi and Zhundong region is a major source of CO_2 emissions in Xinjiang
Korla area
Kashi area
Hetian area

Brief summary

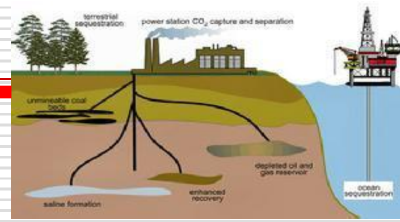
Thermal power plant

Coal chemical enterprises

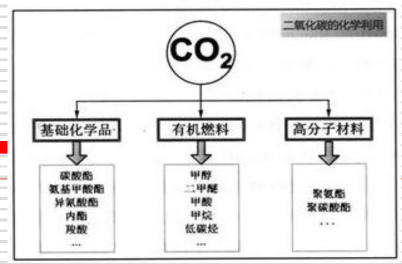
Steel plant

Chemical fertilizer plant

Carbon capture



Geological storage



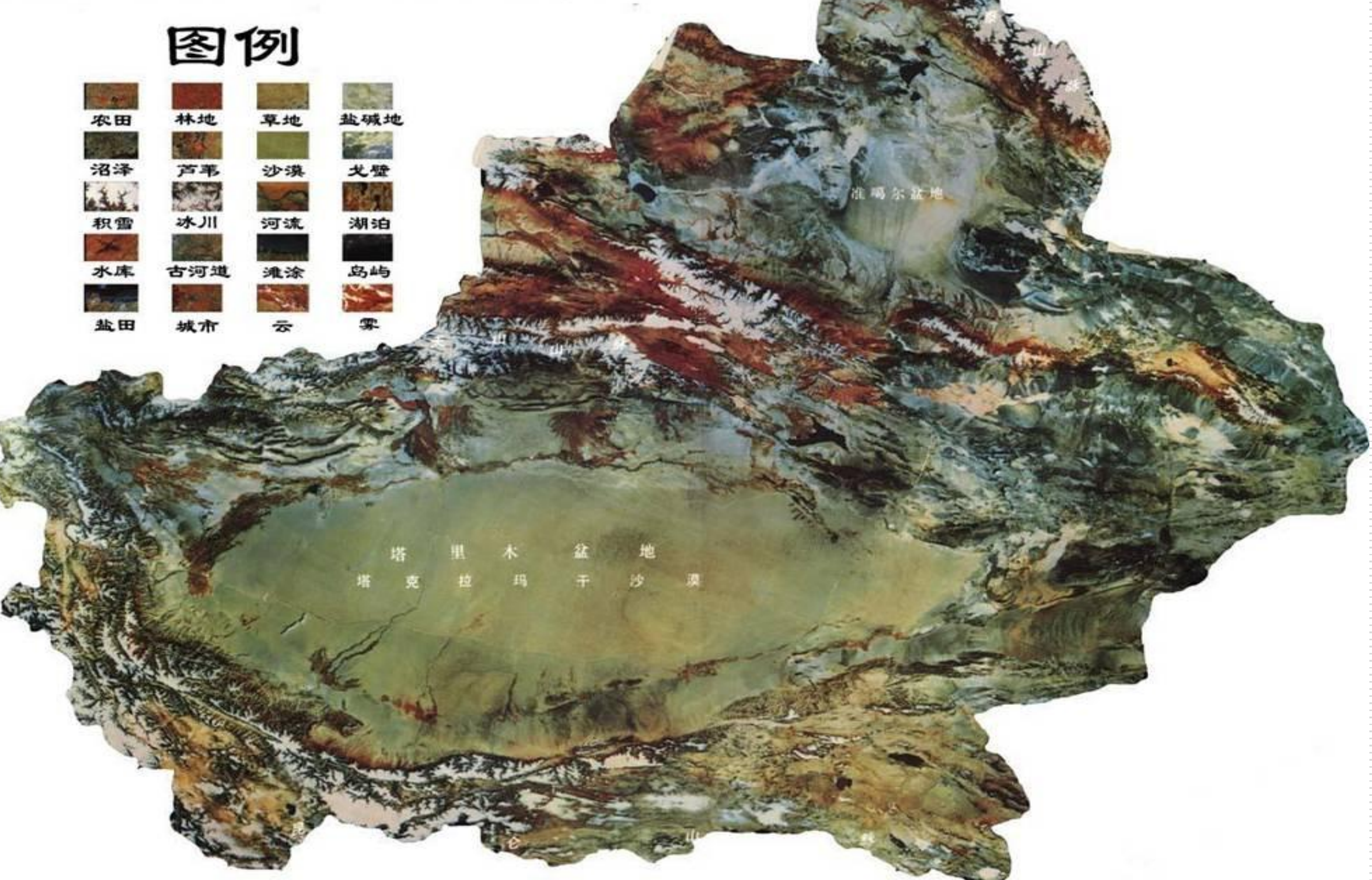
Chemical use

四、 A brief introduction of major carbon sinks of Xinjiang

1、The overview of the basin

Xinjiang has a unique topogarghy feature, with a landscape pattern of "three mountains sandwiched two basins" .Altai Mountains is in northern. Southern Kunlun Mountains lies in the middle of the Tianshan Mountains in Xinjiang. Xinjiang Tianshan Mountain divides Xinjiang into the halves, Tarim Basin in the southern,and the Junggar Basin in the northern。

新疆卫星影像示意图

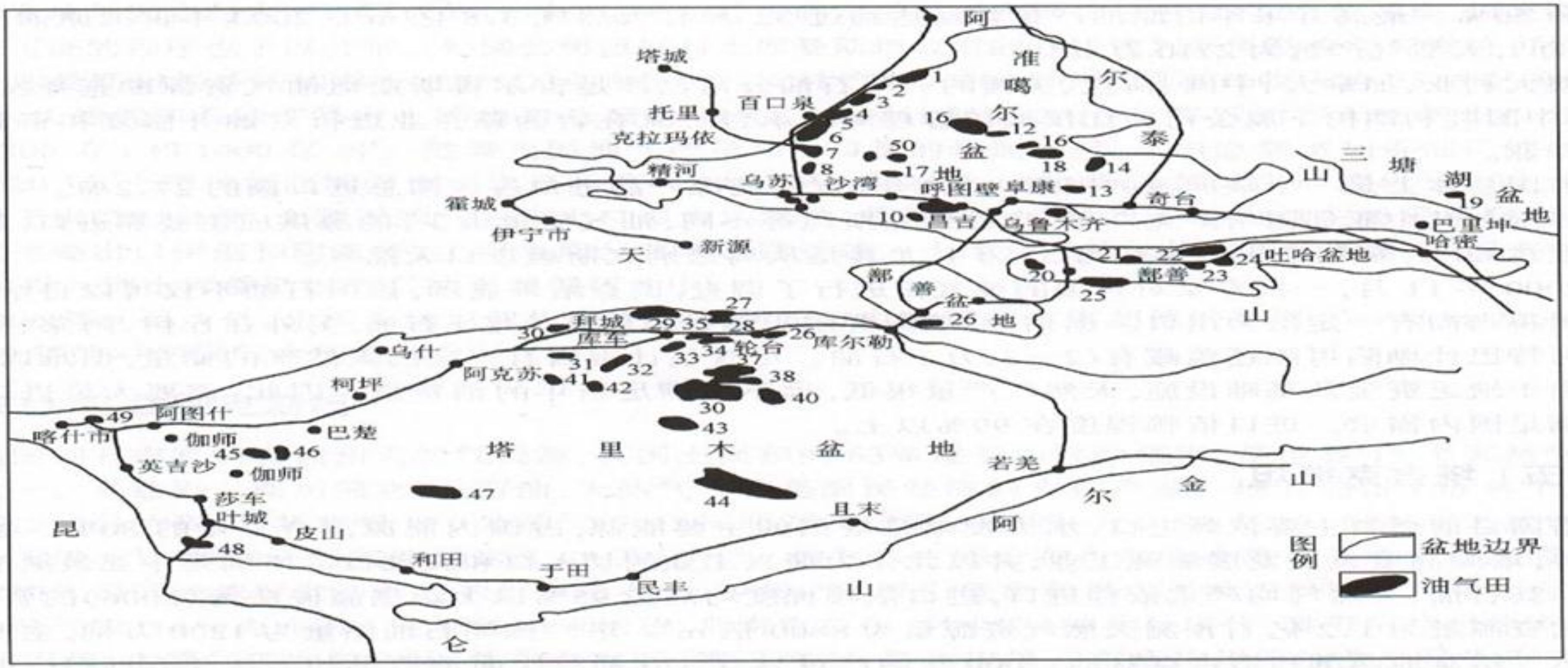

图例
农田
林地
草地
盐碱地
沼泽
芦苇
沙漠
戈壁
积雪
冰川
河流
湖泊
水库
古河道
滩涂
岛屿
盐田
城市
云
雾
准噶尔盆地
塔 里 木 盆 地
塔 克 拉 玛 干 沙 漠

2、target evaluation summary table of Geological storage of carbon dioxide

Index layer	Index sub layer	Target groups
Safety	1、Regional crustal stability	① peak ground acceleration; ② goal target seismic safety; ③ within 25km radius surrounding whether active faults
	2、Cap seal	① the main cover of the depth; ② cap rock; ③ main caprock layer thickness; continuity ④ Continuous cover layer distribution;⑤ penetration;⑥on top of cap the main secondary retention capacity ; ⑦ micro-cap index closed
	3、The possible leakage of CO_2 channel	①The development of the fracture and crack;②the target area whether has other depth greater than 800 m drilling and abandoned wells; ③ fracture that in the existing technical condition was not found
	4、hydrogeological conditions	①The hydrodynamic effect; ②head of state in deep saline aquifers
Reservoir scale	1、reservoir characteristics	① main reservoir depth; ② reservoir rock lithology; ③ thickness of the main reservoir; ④heterogeneity; ⑤ formation water salinity; ⑥ formation pressure coefficient; ⑦ effective reservoir aspect ratio
	2、Reservoir parameters	① porosity; ② penetration
	3、Geological characteristics of geotherm	① geothermal gradient; ② heat flow; ③ surface temperature
	4、Reservoir storage prospects	① effective sequestration;②use fixed number of year
Social and environme-ntal risks	1、Social environment	① population density;②From the residents point distance； ③land use status
	2、Geological environment	①the geological hazard susceptibility;②whether in mining subsidence area, Karst collapse area, land subsidence, desert activity area, volcanic activity area;③Whether below rivers and lakes, the highest water level of reservoir line or floodplain
	3、Nature Area	①Whether accord with city and regional development planning, whether in the agricultural protection areas, nature reserves, scenic areas, heritage conservation areas, drinking water supply planning area and area, water source protection of mineral resources reserves and other zones that need special protection ; ② vegetation condition
	4、Drinking water sources from the relationship and length	① whether the upper reservoir of CO_2 available industrial and agricultural use aquifer; ② whether the main drinking groundwater recharge areas; ③ from rivers, reservoirs and carbon source; ②carbon source distance;③ the mode of transport; ④ the ore condition other surface water sources of drinking length
economic suitability		The size of the carbon source; carbon source distance; the mode of transport; the ore condition

3、Suitable main basins for Xinjiang CO_2 geological sequestration

⑴The main oil and gas basin cases in Xinjiang



新疆主要含油气盆地及主要油气田分布示意图

Distribution sketch of major oil-gas-bearing basins and major oil-gas fields in Xinjiang

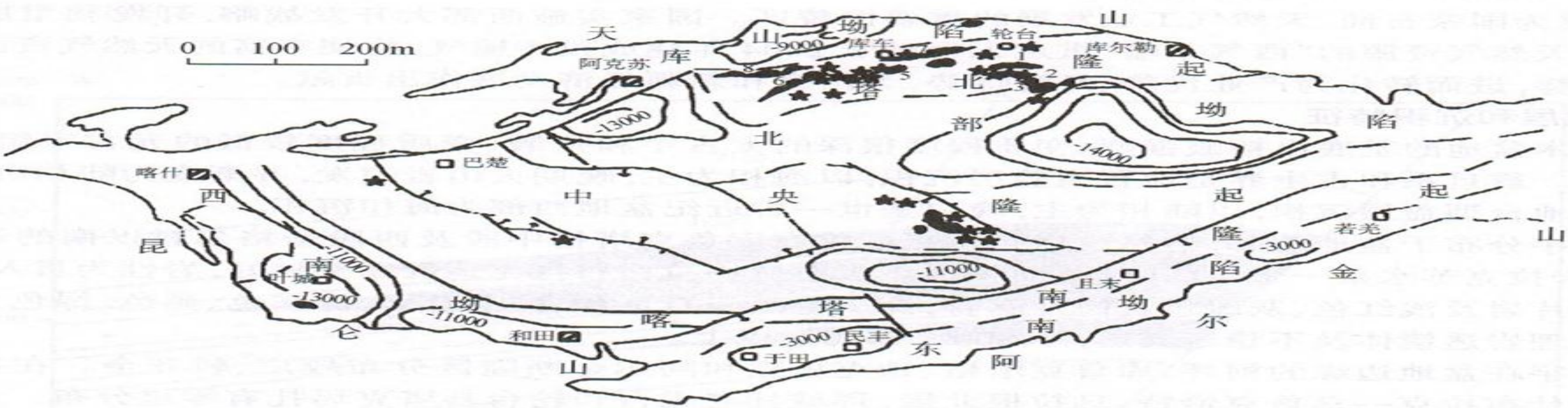
（据康有柱，2006）

油田名称：1—夏子街；2—风城；3—乌尔禾；4—百口泉；5—克拉玛依；6—红山嘴；7—小拐；8—车排子；9—独山子；10—齐古；11—呼图壁；12—三台；13—北三台；14—火烧山；15—五彩湾；16—石西；17—石南；18—彩南；19—北小湖；20—伊拉湖；21—胜金口；22—丘陵；23—鄯善；24—温吉桑；25—乌鲁克；26—宝浪；27—伊奇克里克；28—依南迪那尔；29—克拉 2；30—大宛齐北；31—羊塔克；32—英买 7；33—东河塘；34—雅克拉；35—大涝坝；36—轮台；37—轮南；38—阿克库勒；39—塔河；40—达里亚；41—玉东 2；42—英买 2；43—哈德；44—塔中；45—巴什托；46—亚松迪；47—和田河；48—柯克亚；49—阿克力；50—莫西庄

①Tarim Basin（Tarim Oilfield ）

Tarim Basin→China's largest basin, located between the Tianshan Mountains and the Kunlun Mountains, diamond-shaped outline, is a wholly closed inland basin, an arid inland basin.

Basin area of 560,000 km².



塔里木盆地油气及工业性含油气构造分布图

Distribution of oil-gas and industrial oil-gas-bearing structures in Tarim Basin

（据梁狄刚，1997）

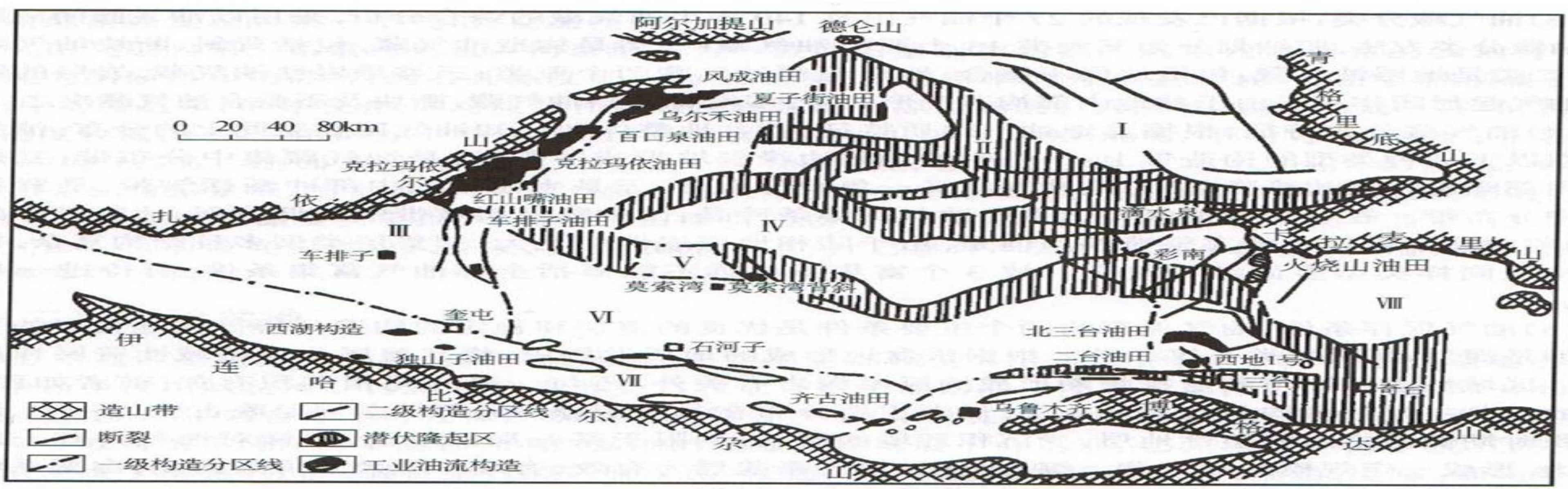
主要油气田名称：1—轮南；2—桑塔木；3—解放渠东；4—告吉拉克；5—东河塘；6—英买力 7 号；7—牙哈；8—羊塔克；9—塔
4 号。★28 个工业性含油气构造

构造单元名称：Ⅰ—北部坳陷；Ⅱ—中央隆起；Ⅲ—西南坳陷；Ⅳ—塔南隆起；Ⅴ—东南断隆

②Junggar Basin （Xinjiang Oilfield）

Junggar Basin→China's second largest basin, located between the Tianshan Mountains and the Altai Mountains, roughly triangular in shape.

Basin area of about 134,000 km^2.



准噶尔盆地油气田分布略图

Distribution sketch of oil-gas fields in Junggar Basin

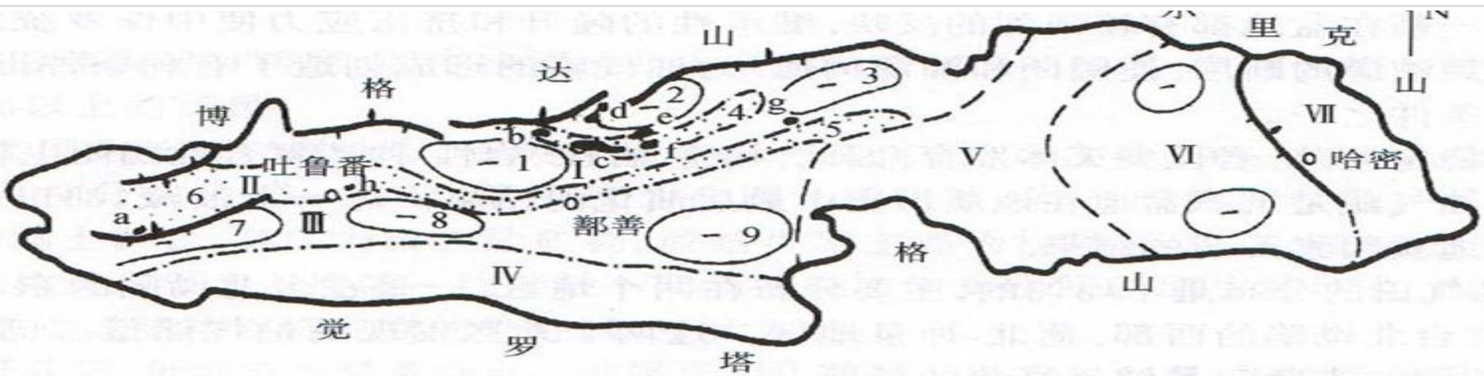
（新疆通志·地质矿产志，2002）

Ⅰ—乌伦古断陷；Ⅱ—三个泉隆起；Ⅲ—西北缘冲断带；Ⅳ—玛湖-漠区坳陷；Ⅴ—中央隆起带；Ⅵ—昌吉坳陷；Ⅶ—乌鲁木齐山前坳陷；Ⅷ—沙(丘河)-奇(台)隆起区

③Turpan - Hami Basin（Turpan-Hami Oilfield）

Turpan - Hami Basin → Located in the eastern part of Xinjiang, is the mountain basin surrounded by the Tianshan Mountains. Lectra north of Bogda and Hal Hill, south of Jueluotage Hill. Basin east to west 600km, north-south width 50-130km.

Basin area of 55,000 km^2.



吐-哈盆地坳陷与油田分区略图

Zoning of depressions and oilfields in Turpan-Hami Basin

（据黄第藩等，1995）

Ⅰ—北部坳陷带：1—台北坳陷；2—丘东坳陷；3—红台坳陷；4—凹中凸起带；Ⅱ—中央隆起带：5—火焰山断裂带；6—肯德
起带；Ⅲ—南部坳陷带：7—托克逊坳陷，8—吐鲁番坳陷，9—塔克泉坳陷；Ⅳ—艾丁湖斜坡带；Ⅴ—嘹墩隆起；Ⅵ—三堡
Ⅶ—哈东隆起；a、b、c、e、f、g、h 为油气聚集区

The main data features of the Basin in Xinjiang

Xinjiang basin characteristics index data table							
Evaluation / Basin name	Basin feature						
	Area（$10^4 km^2$）	structure	Burial depth（km）	Faulting	Land surface temperature（℃）	Geothermal gradient（℃/100m）	Heat flow values（mW/m^2）
Junggar Basin	13.4	Aggregation mountain	12	Development, small	6	2.02	42.6
Turpan Hami Basin	5.5	Aggregation mountain	10	Development, big	—	2.5	40.79
Tarim Basin	56	Aggregation mountain	15.5	Concentrated、big	9.6	1.764	46.2

Xinjiang basin reservoir characteristics index data table

Xinjiang basin reservoir characteristics index data table					
Evaluation index / Basin name	Reservoir characteristics				
	Reservoir thickness (m)	The lithology of reservoir	Reservoir permeability ($10^{-3}m^2$)	Reservoir porosity	Cover layer (%)
Junggar Basin	900	Sandstone, mudstone	8	15	Better
Turpan Hami Basin	500	Sandstone	225	18	Better
Tarim Basin	600	Sandstone	55	15	Better

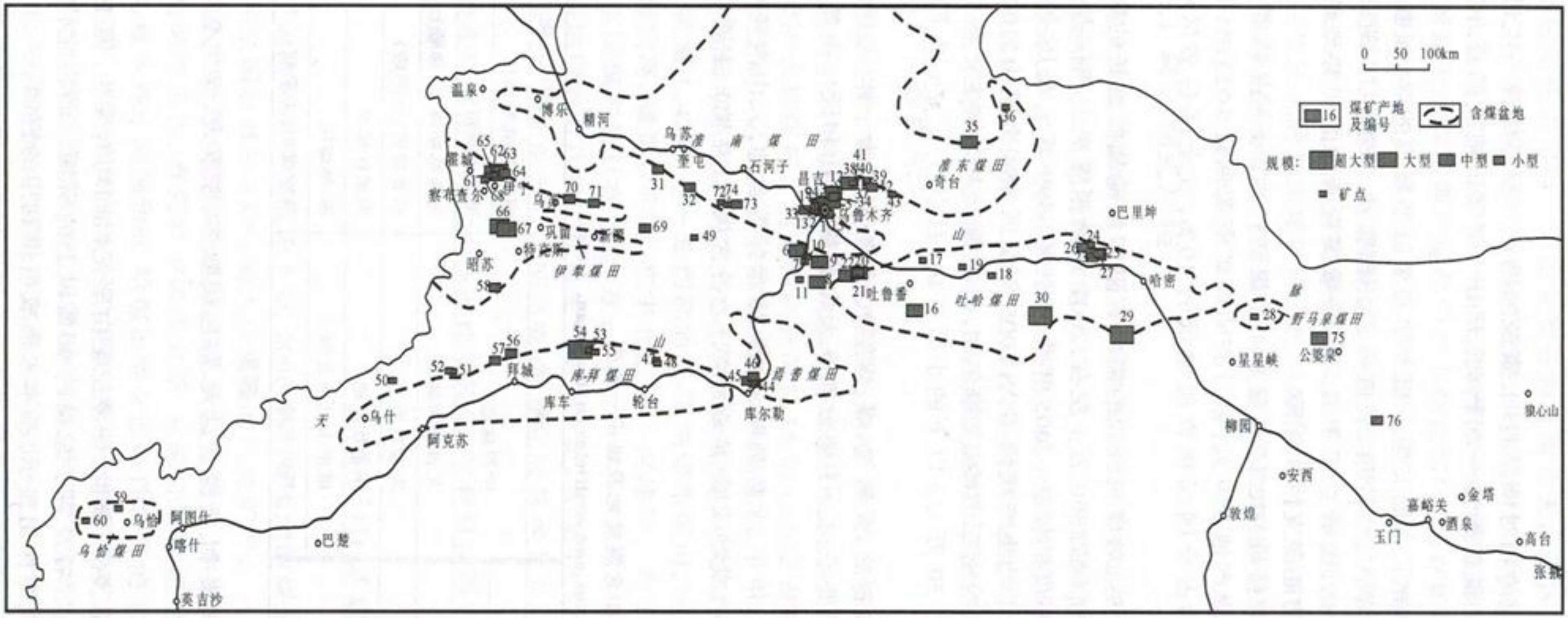
⑵Introduction of major coal basins in Xinjiang

Xinjiang Coal Mesozoic period in each coal and coal-bearing basins in the Upper Triassic and Lower Jurassic coal developmental；

Quasi-Southern coalfield, Tory - Heshentuoluogai, Zhundong coalfield and Turpan-Hami Basin, etc， Coal is mainly produced in the Jurassic Badaowan and Xishanyao coal within the formation, are generally low ash, low sulfur long flame coal, non-caking coal and gas coal.

Yili basin, coal and Yanqi Tabei area, etc， are generally low ash, low sulfur gas coal and long-flame coal；

Wuqia coalfield, southern Tarim Basin, Southwest， Coal is mainly produced in the leaf group Consumerella group and Yang coal-bearing strata, is not caking coal, gas coal, lean coal.



中国天山煤矿分布略图

Distribution sketch of coal deposits in Tianshan, China

煤矿产地名称：1—四道岔煤矿区；2—老君庙煤矿区；3—八道湾井田；4—六道湾井田；5—芦草沟井田；6—南山后峡二井田；7—南山三井田；8—艾维尔沟井田；9—南山通沟煤矿区；10—板房沟—头屯河煤矿区；11—南山六井田；12—乌河-白杨河煤矿区；13—桌子山井田；14—西山煤矿区；15—碗窑沟矿区；16—艾丁湖煤矿区；17—七泉湖煤矿区；18—七克台煤矿区；19—科克牙煤矿区；20—柯尔碱四井田；21—柯尔碱煤矿区；22—吐鲁布拉克井田；23—三道岭小黄山煤矿；24—三道岭西山煤矿；25—三道岭沙枣泉井田；26—三道岭砂墩子煤矿区；27—三道岭北泉井田；28—野马泉一井田；29—大南湖煤矿区；30—沙尔湖煤矿区；31—四棵树井田；32—巴音沟煤矿；33—硫黄沟煤矿区；34—铁厂沟井田；35—沙丘河-老君庙煤矿区；36—窝头泉煤矿区；37—小龙口井田；38—三工河煤矿区；39—沙沟井田；40—五工河井田；41—小黄山井田；42—大黄山煤矿区；43—水西沟煤矿区；44—塔什店一井田；45—塔什店煤矿区；46—塔什店二井田；47—阳霞河东岸煤矿；48—阳霞煤矿区；49—古伦沟煤矿；50—萨瓦甫齐煤矿；51—琼库孜巴依煤矿；52—克其克库孜巴依煤矿；53—阿艾煤矿区；54—俄霍布拉克井田；55—比尤勒包谷孜井田；56—库尔阿肯井田；57—别嘎逊摇尔煤矿区；58—铁列克井田；59—康苏井田；60—沙里拜井田；61—南台子煤矿区；62—干沟煤矿区；63—劳艾依图井田；64—皮里青河东区 1 井田；65—干沟上游一井田；66—达拉地井田；67—库尔捷太煤矿区；68—霍城县煤矿一井田；69—可尔克煤矿区；70—吉伦台煤矿区；71—沙特布拉克煤矿区；72—南山水沟煤矿区；73—南山红沟煤矿区；74—南山石场沟井田；75—吐路-驼马滩矿区；76—金庙沟矿区

中国天山主要煤田、煤产地资源/储量和预测资源量统计表

Resources/reserves of major coalfields and coal producing areas and statistics of forecasting resources in Tianshan, China

含煤区	煤田	主要煤产地或煤矿区	勘查区数	探明资源储量		资源量(亿 t)	
				资源储量 亿 t	占总量 百分比/%	预测资源量	资源总量
天山北麓含煤区	准南煤田	乌鲁木齐、四棵树、巴音沟、玛纳斯、阜康、柴窝堡-达坂城、后峡	147	279	28.43	1765	2052
		南山煤产地	4	4.59	0.05		
		后峡煤产地	3	3.64	0.37		
	准东煤田	大井将军庙、芦草沟、红沙泉、将军庙、将军戈壁、五彩湾、老君庙、西黑山、黄草湖	2	132.65	13.51	3226	3359
天山含煤区	吐-哈煤田	艾维尔沟、布尔碱-克尔碱、桃树园-可可亚、七克台、三道岭、白杨沟-五堡、伊拉湖、艾丁湖、库木塔格、沙尔湖、中山梁、大南湖、烟墩、骆驼圈子、梧桐窝子、野马泉、碎石梁、鱼尔沟	26	442.67	45.09	5301	5744
	伊宁煤田	南台子、干沟、莠艾依图、喀赞其、皮里青、克尔克、沙特布拉克、胡吉尔台、吉伦台、洪拉海、达拉地	24	23.32	2.38	4270	4293
	尼勒克煤田		5	7.49	0.24	422	429
	昭苏煤田		1	0.48	0.0	115	115
	尤鲁都斯煤田	古伦沟、巴音沟、塔什店、哈满沟、库米什	1	1.36	0.01	137	138
	库米什煤田		1	0.59	0.01	264	264
	焉耆煤田		5	8.46	0.86	958	966
天山南麓含煤区	库拜煤田	阿艾、俄霍布拉克、库尔阿肯、舒善河-喀拉苏、铁列克、阳霞、音西铁热克-台勒曲克、小兰台子、萨瓦甫齐、比尤勒包谷孜	21	18.10	1.84	315	333
	托云煤田	卡拉吉里岗、黑孜苇、康苏、沙里拜、阿根布拉克	4	0.34	0.03		
	孔雀河					1037	1037
总计			244	920	100	17810	18730

⑶Estimation of CO2 geological storage potential in Xinjiang

①Deep saline aquifers

The method we use to calculate the potential sequestration is Ecofys and Tno-Ting report in 2002 raised， Assuming 1% of deep saline aquifers volume of structural stratigraphic traps, and only 2% of the structural stratigraphic traps can be used as carbon dioxide sequestration. Using the following formula to calculate： $M_{co2ts} = \rho_{co2s} \times A \times H \times 0.01 \times 0.02 \times \varphi / 10^6$

M_{co2ts}---Carbon dioxide in deep saline aquifers buried in theory stock，10^6t；

ρ_{co2s}---Under the density of carbon dioxide ground conditions，kg/m^3，usually1.977kg/m^3；

A---Basin area of deep saline aquifers located， m^2；

H---The average thickness of the deep saline aquifers， m； Take 0.1 times the thickness of the deposited layer；

φ---Average porosity of the rock deep saline aquifers,%. Take the experience of 0.2 based on relevant information.

②CO_2-EOR reservoirs

Jerry Shaw pointed out that, in the use of carbon dioxide for enhanced oil recovery in the stock reservoir buried in theory can be applied to calculate the following two equations：

Before the carbon dioxide breakthrough：$M_{co2to} = \rho_{co2r} \times (E_{RBT} \times N \times B_o)$

After carbon dioxide breakthrough：$M_{co2to} = \rho_{co2r} \times [(E_{RBT} + 0.6(E_{RHCPV} - E_{RBT})]N \times B_o$

M_{co2to}---Carbon dioxide in underground reservoirs theoretical stock，10^6t；

ρ_{co2r} ---Carbon dioxide density at reservoir conditions，kg/m^3；

N---Crude oil reserves，10^9m^3；

B_O---Crude oil volume factor，m^3/m^3；

E_{RBT}---Recovery of crude oil before breakthrough the carbon dioxide，%；

E_{RHCPV}---Recovery of a hydrocarbon pore volume injection when (HCPV) crude carbon dioxide，%。

③Non-mined coal seams

Carbon Sequestration Leadership Forum believe that in the case of coal seam gas has been adsorbed, coal stocks are usually buried in the theoretical calculation of this formula：

$$M_{CO_2tc} = \rho_{CO_2s} \times IGIP$$

M_{CO_2tc}---Carbon dioxide can not be mined coal seams in theory buried stock，10^6t；
ρ_{CO_2s}---Carbon dioxide density under standard conditions，t/m^3，usual 1.977t/m^3；
$IGIP$---Raw coal gas (methane gas) reserves，$10^6 m^3$。

Raw coal gas (methane gas) reserves (IGIP) is calculated by the following formula：

$$IGIP = A \times H \times n_c \times G_c \times (1 - f_a - f_m) / 10^3$$

A---Coal basin surface area,，km^2；

H---Effective thickness of coal seams，m；

nc---Coal density, t/m^3, usually taken 1.4t/m^3；

fa---Ash content of coal accounted for coal，%；

fm---Coal's share of coal in the wet mass fraction，%；

Gc---Coalbed gas content (adsorbed amount)m^3（gas）/t（coal）。

Coal bed gas content (adsorption capacity) Gc can be calculated from the Langmuir isotherm equation such as access：

$$G_c = V_L \times \frac{P}{p + p_L}$$

V_L---Langmuir volume，That is the maximum amount of gas adsorbed given temperature seams，m^3/t；

P_L---Langmuir pressure，The maximum amount of gas adsorbed seam when the pressureMPa；

P---The current pressure on the coal seam，MPa。

Brief summary：

Three basins in Xinjiang has a huge storage potential, a huge area, and relatively thick reservoir. The size of the basin area directly determines the size of the storage capacity of the basin ,reservoir thickness is also a great influence on the storage capacity. Large oil and gas layer provides CO_2 sequestration sites ,geological reserves of oil and gas from a reflection of the good sedimentation basin and reservoir capacity and traps，It is an important indicator of the basin CO_2 sequestration potential. meanwhile, saline aquifers basin is also a good place sequestration of CO_2.

五、Suggestions of Xinjiang CCUS

1、 CCUS Xinjiang is not only a scientific issue, but also the urgent need to solve social and environmental problems.

2、 Government guidance, third-party coordination, commercial mode of operation is CCUS's Xinjiang region to achieve more realistic model.

3、 The need for CO_2 capture project to develop some targeted subsidies or incentives to ensure their implementation have economic viability.

4、CO_2-EOR has obvious geographical advantages and convenience in the implementation of Xinjiang.

六、Conclusions and Prospects

Xinjiang has a great potential in the aspect of the implementation of CCUS Technology, source, CO_2 sinks and transport conditions are suitable for the implementation of CCUS technology in Xinjiang.

①Xinjiang is rich in coal resources.

②Xinjiang has China's largest inland basin, and its carbon dioxide geological storage potential is considerable. Especially in the Tarim, Junggar and Turpan-Hami Basin, rich oil and gas resources, easy to implement the CO_2-EOR.

③CO_2 emission sources and storage sites for a short distance in Xinjiang . reduce transportation costs will be more conducive to the implementation of CCS technology in Xinjiang.

④Xinjiang CO_2 geological storage with high security. Xinjiang is rich in oil and gas resources, a high level of exploration, a sound geological data, a relatively favorable geological structure, trap condition, not prone to leakage, suitable CO_2 sequestration.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Further work in the future suitability diagram can be drawn based on the evaluation results， According to the case of sources and sequestration of CO_2 emissions in Xinjiang， Investigation of matches of sources and sinks for Xinjiang. Taking a step forward to improve the results of previous research and gives feasible suggestions summary . so CO_2 geological storage technology really breaking new ground for the country's greenhouse gas emissions cause.

Thank You

09068720188

23089907@qq.com

23089907